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17. ABSTRACT (MAX. 250 WORDS)

The background, use, organization, equipment, capabilities, planning, and preparation for studio telecasts, and the evaluation of the TV Center at Air University were given.

The TV Center was organized under the Air University Library to produce and direct the telecasts for the three AU schools equipped to receive them. Television was used to enhance instructional techniques, to improve seminar programs, to increase the effectiveness of evaluation, to aid in extra-curricular activities, to train effective speakers, and to provide guest speakers. Responsibility for instruction and instructors rested with the individual schools. The production and technical staff assisted and advised faculty members in preparing program formats and scripts, in conducting rehearsals, and in evaluating the completed program. Studio equipment, control room equipment, and receiving equipment were described and their capabilities were analyzed.

The first step in planning for studio telecasts consisted of scheduling a script conference with the TV Center at least 90 days before the telecast, at which time a resume of the presentation and an outline of proposed methodology were presented and visual aids were planned. The next step was rehearsals, which were followed by the performance of the actual telecast and finally the preparation of a program critique.

Observations from staff visits to schools using closed-circuit television and excerpts from pertinent experimental findings were included. Seleoted references followed the text.

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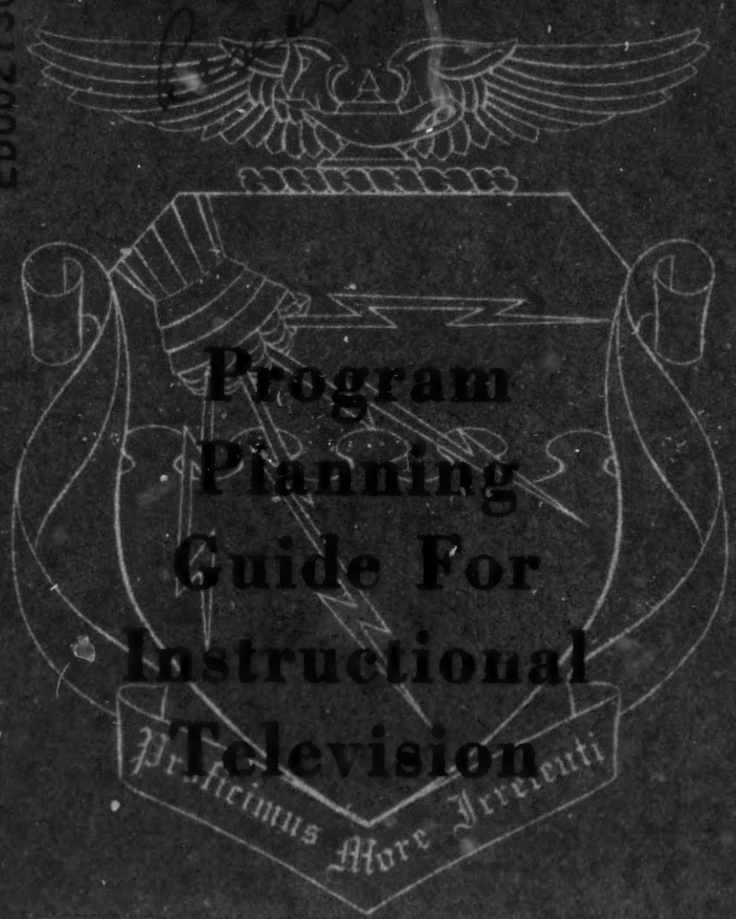


# Program Planning Guide For Instructional Television

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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Maxwell Air Force Base, Alabama

# Program Planning Guide For Instructional Television

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## BACKGROUND

THE FIRST organized planning for television at Air University began about 1952 when a TV committee started a "5-year plan" of study, research, and evaluation. The committee visited commercial and closed circuit installations, studied available reports, analyzed our curriculums, determined objectives and requirements, and made plans. Several experiments were conducted to determine how effective television would be in the lecture-seminar system of instruction currently in use at Air University.

In 1957 Command and Staff College determined that a limited TV installation could be used to good advantage. A studio was improvised and permission obtained to purchase a complete system as training equipment (P448 funds). The installed system cost $123,000 and included two studio vidicon cameras, a multiplexer and film camera chain, 69 monitors, and the necessary power supplies, control and distribution equipment. In addition the system included two remotely controlled TV cameras mounted in the Command and Staff College auditorium, a GianTView teleprojector, a kinescope recorder, two off-air tuners, studio lights, microphones, and a 6-line telephone talk-back system. The installation was completed in 1958 and Command and Staff College made extensive use of the system for three years.

In 1960 funds were approved for an expanded facility to serve Squadron Officer School and Academic Instructor and Allied Officer School as well as Command and Staff College. So the TV Center was established (July 1960) under the Air University Library to serve the three schools with instructional telecasts. Most of the original studio equipment was transferred to Academic Instructor and Allied Officer School for use as a television teaching laboratory.

## USE

The uses of television at Air University fall generally into these areas:

A. To ENHANCE INSTRUCTIONAL TECHNIQUES. Our purpose is to help the instructor instruct. Our main objective is to cause more students to learn more. Television can aid the instructor to convey ideas visually. Experienced television production personnel assist the instructor in the most effective use of the medium. Exploiting the visual resources of television to enliven and clarify exposition helps the instructor solicit intellectual as well as emotional responses.

B. To IMPROVE SEMINAR PROGRAMS. Television permits the instructor or control staff to guide all seminar groups through the problem-solving situation. Every student receives the same directions directly from the instructor. Group solutions can be compared with full knowledge that ali of the groups were working with identical information, obtained at the same time. Very realistic war gaming exercises have been devised. The control staff can offer guidance and corrections, as well as provide information on the changing situation, during the problem exercise.

C. To INCREASE EFFECTIVENESS OF EVALUATION. Television provides an ideal method for instructors to discuss the objective tests with all of the students immediately after completion of the test. All of the students see and hear the qualified expert who prepared the test explain right and wrong choices.

D. To AID IN EXTRA-CURRICULAR ACTIVITIES. Weather briefings are presented to all students scheduled for proficiency flying. Orientation and open houses are improved by television. Current events are brought to the students through network newscasts. Major addresses,

State of the Union speech, significant UN events, and others are incorporated into the curriculum, but the students keep up with developments via selected broadcasts. Make-up, optional, and remedial programs can be telecast during otherwise free time.

E. SPECIAL APPLICATIONS. Effective speaking is a part of every general service school curriculum. More and more officers are required to make appearances via TV. When the schedule permits, practice speaking exercises are conducted in our studio with live cameras for experience and realism. Strategically located monitors permit commandants, faculty, and visitors to view auditorium and studio telecasts at their convenience or when seating space is not available to see the presentation live. The television tape recorder enables the schools to present outstanding guest speakers who are unable to appear in person. It is also being used to build a library of significant or outstanding faculty presentations.

## ORGANIZATION

The TV Center was organized under the Air University Library to produce and direct the telecasts for the AU schools equipped to receive them. Responsibility for instruction and the instructors remain with the schools.

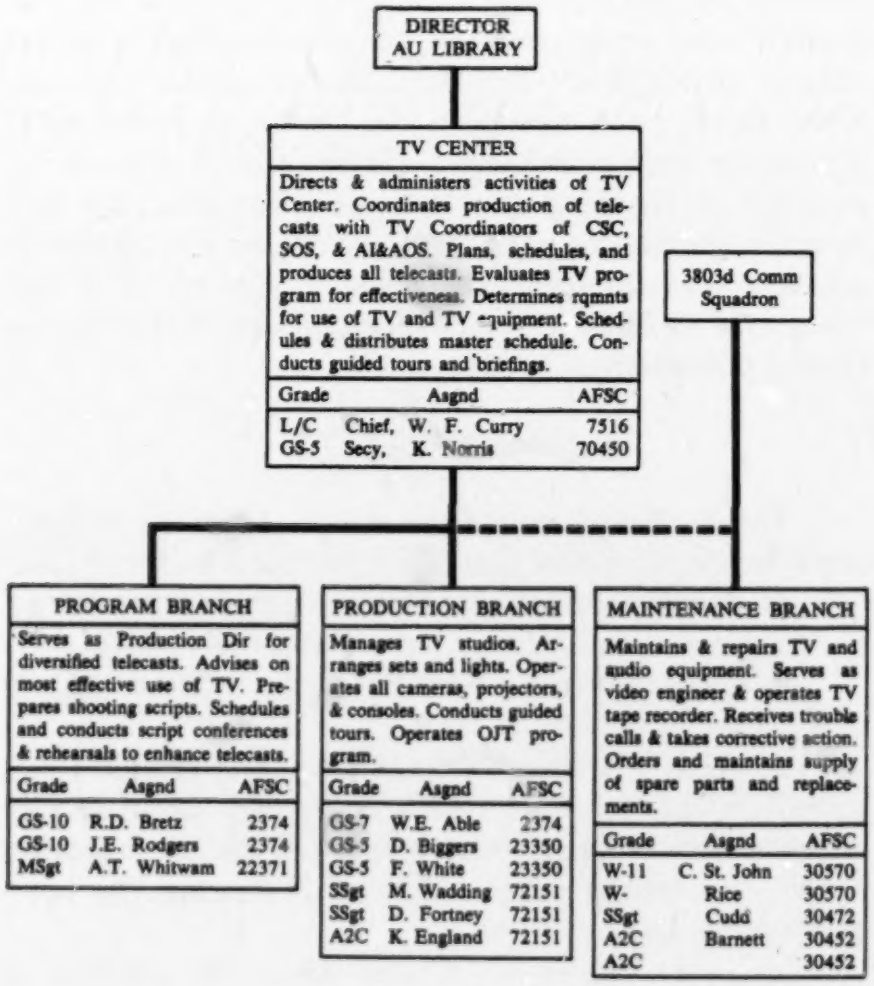
A. ORGANIZATION AND FUNCTION CHART (CONDENSED ON PAGE 4).

B. AU-TV STAFF. The production and technical personnel on the TV Center staff assist and advise faculty members in "blocking out" program formats, preparing scripts, conducting rehearsals, and evaluating the completed program.

1. The Chief, TV Center, directs the activities of the Center and all elements of the telecasts.

# TELEVISION CENTER

## AIR UNIVERSITY LIBRARY


DIRECTOR
AU LIBRARY
TV CENTER
Directs & administers activities of TV Center. Coordinates production of telecasts with TV Coordinators of CSC, SOS, & AI&AOS. Plans, schedules, and produces all telecasts. Evaluates TV program for effectiveness. Determines rqmnts for use of TV and TV equipment. Schedules & distributes master schedule. Conducts guided tours and briefings.
Grade Asgnd AFSC
L/C Chief, W. F. Curry 7516
GS-5 Secy, K. Norris 70450
3803d Comm Squadron
PROGRAM BRANCH
Serves as Production Dir for diversified telecasts. Advises on most effective use of TV. Prepares shooting scripts. Schedules and conducts script conferences & rehearsals to enhance telecasts.
Grade Asgnd AFSC
GS-10 R.D. Bretz 2374
GS-10 J.E. Rodgers 2374
MSgt A.T. Whitwam 22371
PRODUCTION BRANCH
Manages TV studios. Arranges sets and lights. Operates all cameras, projectors, & consoles. Conducts guided tours. Operates OJT program.
Grade Asgnd AFSC
GS-7 W.E. Able 2374
GS-5 D. Biggers 23350
GS-5 F. White 23350
SSgt M. Wadding 72151
SSgt D. Fortney 72151
A2C K. England 72151
MAINTENANCE BRANCH
Maintains & repairs TV and audio equipment. Serves as video engineer & operates TV tape recorder. Receives trouble calls & takes corrective action. Orders and maintains supply of spare parts and replacements.
Grade Asgnd AFSC
W-11 C. St. John 30570
W- Rice 30570
SSgt Cudd 30472
A2C Barnett 30452
A2C 30452

2. The Program Director helps the instructor plan the program, prepare scripts, arrange rehearsals, and is in charge of producing a specific telecast.

3. The Technical Director switches cameras and film sequences on and off the program line at the command of the Program Director. At times, the Program Director may serve as his own TD.

4. The Video Engineer "shades" or controls picture quality.

5. The Audio Engineer controls sound elements from the microphones, recorder, and film.

6. The Cameramen cover studio action at the command of the Program Director.

7. The Floor Manager cues talent, pulls cards, arranges lights, and assists the Program Director.

8. The Projectionists run the films and slides from the multiplexer.

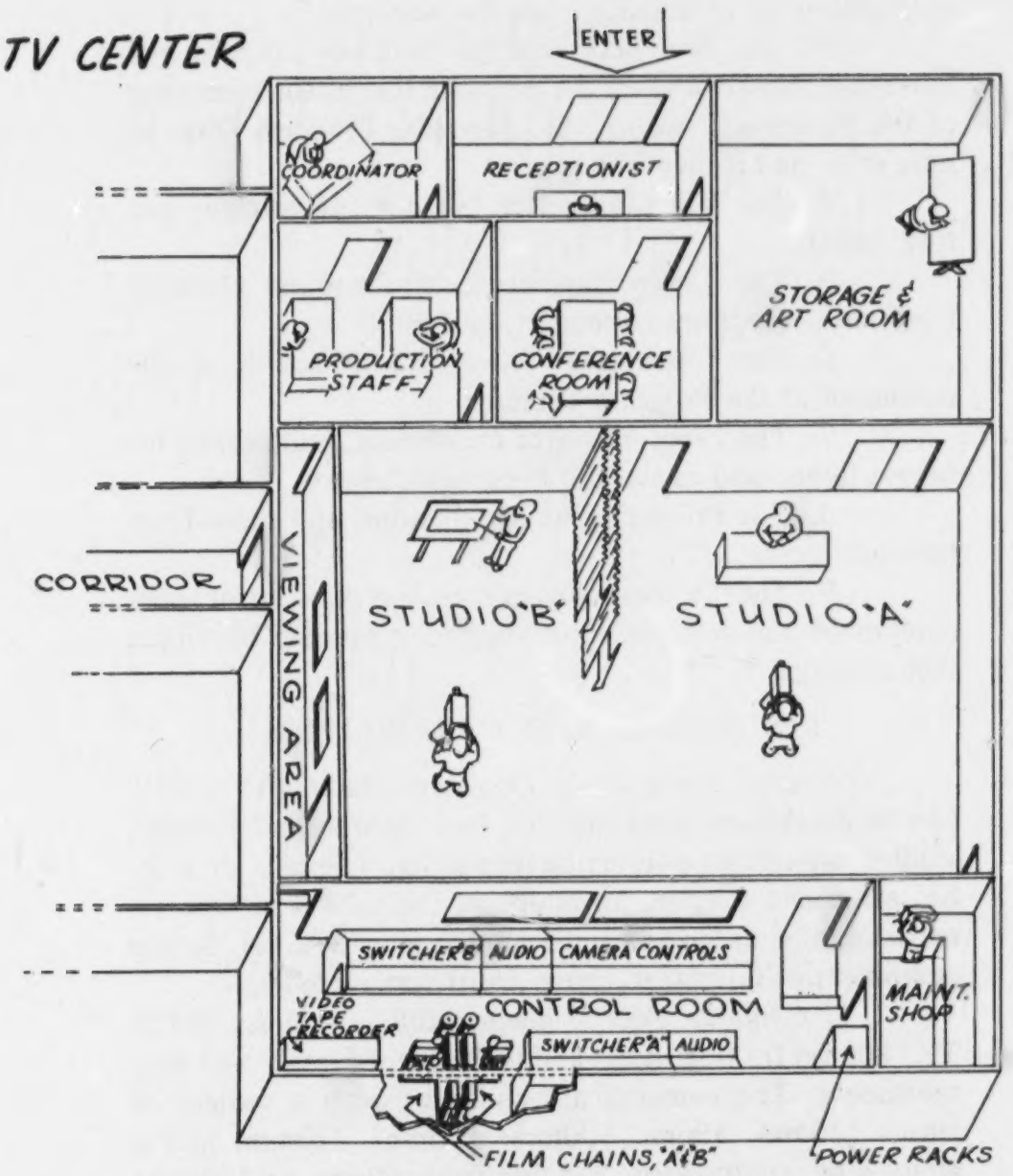
9. The TV Technicians maintain the control room equipment and seminar room monitors; operate the video tape recorder.

## EQUIPMENT AND CAPABILITIES

A. STUDIO EQUIPMENT. One large studio (45′ x 33′) can be divided by draperies into two separate independent studios capable of two simultaneous live telecasts or a rehearsal and a telecast. In addition, the television tape recorder can be used for a third simultaneous telecast. Studio equipment of interest to using instructors includes:

1. *Cameras.* Four 3″ image orthicon cameras (RCA TK11B) on friction heads and pedestals for quick and easy movement. The cameras are equipped with a variety of lenses (35mm, 50mm, 100mm, 150mm, 210mm, and a zoom lens continuously variable from 60mm to 240mm) for any situation.

# TV CENTER


ENTER
COORDINATOR
RECEPTIONIST
STORAGE & ART ROOM
PRODUCTION STAFF
CONFERENCE ROOM
CORRIDOR
VIEWING AREA
STUDIO "B"
STUDIO "A"
SWITCHER "B"
AUDIO
CAMERA CONTROLS
CONTROL ROOM
MAINT. SHOP
VIDEO TAPE RECORDER
SWITCHER "A"
AUDIO
FILM CHAINS, "A" & "B"
POWER RACKS

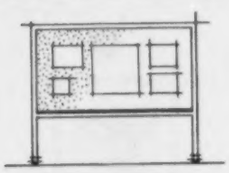
2. *Microphones.* Lavalier (lapel), table, and boom microphones with 24 studio wall receptacles for versatility in programming.

3. *Lights.* Sufficient 6″ and 8″ spotlights, 14″ and 16″ scoops, and fluorescent banks are available to light any set.

4. *Visual display devices.*

a. Blackboards. Magnetic blackboards are provided on portable stands for flexibility and to permit adequate backlighting of the instructor while writing.

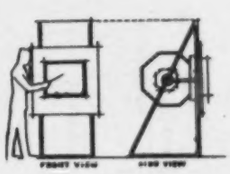
b. Corkboards. Corkboards are on portable stands for the same reasons. Mag tabs can be used on corkboards or blackboards.

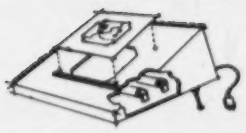


c. Easels. Sufficient wood and metal easels are available to hold briefing charts, camera cards, or other visual aids in card form.

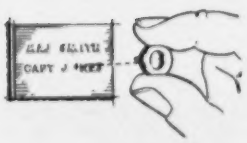
d. Flip boards. A desk easel and a mounted ring binder for displaying titles, drawings, etc. in such a manner that they can be flipped down into position before the camera.

e. Hex-board. A hexagonal drum mounted in a flat in such a manner that the instructor rotates a card at a time into view. Accommodates up to 15″ x 20″ cards.

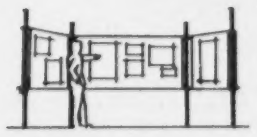




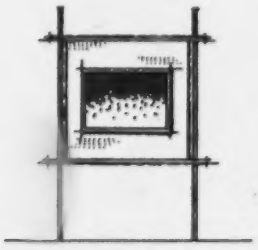
f. Light box. An illuminated translucent window for displaying transparencies of any larger size (Vu-Graph). Standard 2″ x 2″ or 3¼″ x 4″ slides are projected through the multiplexer in the control room.



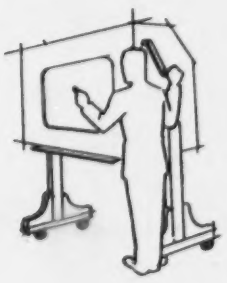
g. Menu boards. A variety of sizes of menu boards with a stock of letters in different sizes are available for titles and special visual aids.



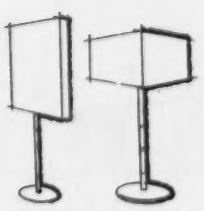
h. Peg board. Peg board is available in a variety of sizes for displaying models, devices, or other visuals in perspective.



i. Rear view screens. An 18″ x 24″ rear view screen is mounted in a flat for use with automatic 2″ x 2″ slide projector. A larger (8′ x 10′) rear view screen is available for projected backgrounds.



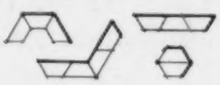
j. Roll board. The most used device is the specially fabricated roll board. It accommodates a roll of 36″ paper that can be used as a writing surface during the presentation or lettered (drawn) in advance and rolled into view when desired.



k. Roto-boards. A variety of revolving display boards are available. Most popular are the 28″ x 44″ two-sided panel and the 21″ x 28″ four-sided box.

l. Sets. Marble top tables, formal and informal sets, plaques, maps, and special background devices for dressing sets are available.

m. Tables. Trapezoidal tables are used in the studios for flexible arrangements. Two, three, four, five, or six man panels are easily accommodated.



B. CONTROL ROOM EQUIPMENT. The equipment necessary to produce and distribute two live and one recorded telecasts is located in the control room. Significant items include:

1. *Camera controls.* Console mounted controls for the four studio cameras, two film cameras, and the two remote cameras in Command and Staff College auditorium. A 15-position switcher and a 9-position switcher (RCA TS11A) permit either director to choose from several camera sources.

2. *Power equipment.* Standard equipment racks hold the power equipment, amplifiers, sync generators, and distribution patch panels.

3. *Multiplexers.* Two multiplexers (RCA TP11C) are installed for the combined or dual studios. Each multiplexer has a 16mm film projector (RCA TP16F), a 35mm slide projector (RCA TP7), and a 3¼" x 4" slide projector (Genarco 6800) as well as a vidicon camera (RCA TK 202) to pick up the projected images. Each projector is remotely controlled from the director's console and has a variac light control to allow light balancing.

4. *Audio consoles.* Two audio consoles (RCA BC6B) to control the audio input and output of

simultaneous telecasts. In addition, two tape recorders (Ampex 350R) are installed to record the audio portion of the telecasts and question and answer sessions or to feed in recorded sound effects, music, or other audio signals.

5. *Off-air tuners.* Two off-air tuners (Conrac AV 12B) are installed to tune in commercial broadcasts for distribution throughout the closed circuit sytem.

6. *TV tape recorder.* A TV tape recorder (RCA TRT 1A) records and plays back the audio and video signals of any telecast up to 90 minutes in length.

7. *Talk-back system.* An intercommunication system is installed in the control room to enable students in the seminar rooms to ask questions of the instructor in the studio. Individual lines run to 45 talk-back points in Bldg 1402, 40 rooms in Bldg 1401, and 65 rooms in Bldg 1403. This is a complete 2-way system.

8. *Teleprojector.* The teleprojector (GianTView 912) can project a large TV image (8′ x 12′) on any surface, forward or rear screen, in a room equipped to receive the TV signal. It is used primarily on the rear screens in the auditoriums. Commercial broadcasts can be picked up directly by the teleprojector's tuner.

C. RECEIVING EQUIPMENT. One hundred eighty-one (181) Kintel closed circuit monitors with dual 6″ speakers and mounted on mobile stands are located as follows:

1. Building 1400, Two 21″ units and one 17″ unit.

2. Building 1401, Fifty-one 21″ units and two 17″ units.

3. Building 1402, Fifty-seven 21″ units and two 17″ units.

4. Building 1403, Sixty-five 21″ units and one 17″ unit.

## PLANNING AND PREPARING FOR STUDIO TELECASTS

After coordination with your school TV Coordinator and following the decision to use television, you should:

A. SCHEDULE A SCRIPT CONFERENCE WITH THE TV CENTER 90 OR MORE DAYS BEFORE THE TELECAST. At this conference:

1. You will present a résumé of the presentation to be televised and outline proposed methodology.

2. The Program Director assigned to you will advise on program format and production techniques.

3. Visual aids will be planned with your Director and the TV Center Illustrator Technician. The Illustrator Technician will make the actual visuals or have them made by the AUL Graphics Section.

4. Rehearsals will be scheduled with your Director.

B. REHEARSE YOUR PRESENTATION.

1. Your first rehearsal will be about two weeks after the script conference. It will be done in the studio without lights and cameras. Here your Director prepares his shooting script (p. 12) as you walk through your presentation.

2. With the visuals prepared and a shooting script made, you are now ready for your camera rehearsals. Usually two camera rehearsals will be sufficient but more may be scheduled if necessary. At these rehearsals you make your presentation before the cameras and with a full studio crew. Rehearsals give you a chance to become at ease in the studio environment and allow you and your director to make any necessary changes in the shooting script. Schedule early and be sure of adequate rehearsal time.

C. PERFORM THE ACTUAL TELECAST.

D. PREPARE A PROGRAM CRITIQUE.

SHOOTING SCRIPT

LESSON (Code) (Title)
CSC-1160 AIR BLAST WEAPON RADII

INSTRUCTOR
CAPT. BREWER

CLASSIFICATION: SECRET

LENGTH: 1 PERIOD

TELECAST

DATE: 13 JAN. 61

TIME: 0800 - 0845

| CAMERA 3 | CAMERA 4 | CAMERA 5 |
|---|---|---|
| | | AUL-TV (1D) (SL) SECRET SLIDE BLACK |
| (ROLL THEME) C.U. GLOBE | FADE | |
| | SUPER | CSC NUMBER (SL) TITLE (SL) INSTR. (SL) |
| C.U. GLOBE DISSOLVE TO (4) | SUPER OUT | |
| | M.C.U. INSTR. AT ROLL BOARD TAKE (3) | |
| C.U. ROLL BOARD TAKE (4) | | |
| | MS INSTR. DISSOLVE TO (5) | FILM CLIP #1 (3MIN) |

AUL FORM 0-78

## EVALUATION

Several instruments and techniques are used to evaluate the effectiveness of the telecasts and serve as guidance for improvement. Two standard questionnaires prepared on every telecast are important to the production staff.

A. INSTRUCTOR CRITIQUE. Each instructor is asked to complete the following questionnaire following each telecast:

Subject of Telecast: _____
(Code) (Title)

Instructor(s): _____ Date: _____

_____ Time: _____

NOTE: The central objective of TV Center is stated simply—to find the ways that television medium can be used best to achieve the educational aims of the curriculums of participating schools. We do not wish to confuse the means (television) with the ends (educational objectives). In order to evaluate our programming we desire comments by instructors who have been on-camera. An analysis of these observations helps us to redirect the programs in the accomplishment of our stated objectives. Please forward this critique to the TV Center, Room 121, Bldg. 1402.

1. Do you feel that the use of TV assisted with the communication of ideas and the improvement of instruction? (Please explain.)
2. Remarks on production quality. (Camera work, lighting, audio, visuals, pace of telecast, talk-back system, et cetera):
3. The TV Staff (scheduling, script conferences, rehearsals, direction, et cetera):
4. Objectionable features of the telecast:
5. Suggestions for additional uses of TV in the curriculum:
6. Overall rating of the telecast (POOR, FAIR, GOOD, EXCELLENT)
7. Additional remarks:
8. Compared to conventional presentation methods, I think the use of TV for my presentation was (less, equally, more) effective. Explain.

B. STUDENT CRITIQUE. Selected students (rotated - one per seminar) are required to complete the following questionnaire for each telecast:

IN ADDITION TO THE STANDARD RATING SHEET PLEASE COMPLETE THIS EVALUATION SHEET FOR THE FOLLOWING TV PRESENTATION:

Period Code No. _____ Title of Telecast _____

Note: Encircle that number on each reaction scale which best *approximates* your reaction to the item.

5 . . . . Excellent, superior, "I like it very much," etc.
4 . . . . Generally good, "I like it," etc.
3 . . . . Fair, average, adequate, "It makes no difference to me," etc.
2 . . . . Generally inadequate, amateurish, "spotty," "I don't like it," etc.
1 . . . . Poor, very unsatisfactory, "I dislike it very much," etc.

a. Lesson organization
5 4 3 2 1

b. Was the material suitable for TV?
5 4 3 2 1

c. Production quality (camera work, lighting, audio)
5 4 3 2 1

d. Did visuals contribute to telecast?
5 4 3 2 1

e. Overall rating of telecast
5 4 3 2 1

f. Do you think that this TV lesson was more or less effective than it would have been if presented in the auditorium?

5. _____much more effective.
4. _____a little more.
3. _____about the same.
2. _____a little less.
1. _____much less.

g. Additional remarks: _____

Student Code Nr._____

## INSTRUCTIONAL TIPS FROM TV STUDIES AND EXPERIMENTS

The following observations gleaned from reports of staff visits made to schools using closed circuit television and excerpts from pertinent experimental findings may prove helpful in planning and preparing for telecasts:

A. STAFF VISITS

1. Stephens College

a. It is recommended that, whenever possible, the TV instructor develop his training aids "live" before the camera, such as writing or drawing on a blackboard.

b. The more natural the instructor the more effective the presentation will be.

c. The technique of using a 20-30 minute TV lecture followed immediately by a 20-30 minute seminar discussion is highly acceptable to TV instructors, seminar instructors, and students.

2. New York University

a. This school places a great deal of emphasis on *production* and has found that some "theatrical type" of presentation is desired. For example, the students did not like TV instructional programs when the instructor sat behind a desk and talked or when the camera was focused constantly on the instructor.

b. A certain amount of make-up for TV instructors is recommended.

c. It is necessary to blend lecture and discussion with the use of television in teaching.

d. The instructor uses more visual aids for a TV lesson than he normally uses in a regular classroom.

e. The instructor goes over each lesson with the program director to pre-plan desired effects, lesson organization, visual aids, and floor plans. They dry-run the program, first without camera and then in full rehearsal. They

find that this sharpens the presentation, gives the instructor a feeling of assurance and does not spoil the spontaneity of the lesson.

f. Those instructors who were most eager to participate in the TV study were those who felt they had a bit of "ham" in them. However, it was found that through the ability of television to extend the instructor so that every sudent seems to be in the front row, the quiet but capable instructor, who is excellent in a small group (but ineffective with larger groups), does very well as a television instructor.

g. All TV instructors should be familiar with studio equipment and production procedures.

h. Students have to learn to learn from television. Instructors in charge of the television sections (seminars) should indoctrinate students about their role in the television teaching-learning process.

3. University of Southern California

a. An effective TV lesson is not a radio program with pictures. TV teaching must make use of the visual resources of the medium.

b. There are no "pat" methods of instruction. Experimental techniques for differing situations are recommended.

c. Although some instructors do not need audio-visual aids, it is recommended that visuals be integrated within a lesson. Such aids help the instructor to provide pictorial variety and to keep the students interested.

d. The instructor should work for relaxation, informality, and sincerity. Project enthusiasm, a manner of friendly persuasiveness. Be natural, not perfect; spontaneous, not rehearsed.

e. The TV instructor should turn his attention upon his message and *forget himself completely*.

f. It is natural to experience tenseness before going on the air. Those who are so impassive that the on-camera situation stirs no emotion in them are often lifeless in performance. Excitement when controlled, is a desirable aid toward a dynamic presentation.

B. EXPERIMENTAL FINDINGS ON TV INSTRUCTION. The AU Library has copies of an excellent summary of current research on television by Hideya Kumata, *An Inventory of Instructional Television Research*. This gives an overview of studies made on student attitudes toward TV, audience factors, instructional methods, learning by television, comparisons of conventional instruction and TV instruction, and the suitability of various subject matter areas to television. A few pertinent findings from this inventory:

1. In comparing three different methods of presenting information by television—lecture, interview, and panel discussion—no significant difference was found in the amount of information communicated by the three methods. However, in this same study, the interview and discussion methods were considered more *interesting* by the students than the straight lecture method.

2. A panel of students with the instructor is an effective device if the panel is unrehearsed and spontaneous.

3. In one study, the instructors stated that there was "feedback" enough from technicians and others in the studio to help gauge and adjust delivery during a telecast.

4. Television appears to be an effective medium for an extremely wide range of subject areas.

5. Most students agree on one hour as the maximum for any one TV session.

6. A factor often criticized is "too rapid pacing" of TV instruction.

7. An evaluation of programs (junior high school level) which students liked best produced these observations:

a. Greater deviation from lecture-type presentations.

b. Unusual visual aids.

c. Demonstrations.

d. Variety of persons on the program.

8. Personal reactions by a literature professor to teaching on television:

a. There is no "trick" to the teaching method. The instructor must be true to himself.

b. Speak in sentences rather than in paragraphs.

c. Since the instructor gets no direct feedback, he must produce the illusion of physical presence to the viewer.

d. The TV medium should not lead to the fallacious assumption that the medium's "popular" character means a lowering of standards for teaching.

e. Much preparatory work must be done before appearing on television.

f. One is expected to be a teacher on TV and not anything else. It is a mistake to try to play a new role just because one is teaching on TV.

C. PREPARATION AND USE OF VISUAL AIDS. These are some of the suggestions on visuals recommended by experimental TV studies:

1. Simplicity is essential. Simple aids, simple construction, and simple operation contribute to maximum effectiveness.

2. Height-to-width ratios must be 3 to 4.

3. When printing, use bold, heavy lines and a minimum number of words.

4. A light figure on a dark background is best.

5. Letters, numbers, and important details should be light against a dark background.

6. Where several contrasts are needed, it is best to work from dark to light to dark to light, etc.

7. Dull surfaces are more satisfactory than glossy.

8. Motion or suggested motion increases attention.

9. Movement and use of visual aids should be deliberate.

10. Writing or drawing before the camera should be done slowly.

11. Use only one panel of blackboard at one time. Use soft grade chalk.

12. Don't overuse any visual aid.

D. ON-CAMERA TIPS FOR THE INSTRUCTOR. The Broadcasting Services Division of the University of Alabama has found the following list of suggestions helpful to instructors appearing on television:

1. The television camera projects your natural personality. The more relaxed and natural you are the better you reach your viewers.

2. Be conversational and unhurried. Allow ample time to cover each point you want to make and to summarize your ideas.

3. Avoid the gestures and voice projection of a platform lecturer.

4. Be prepared to "ad lib" your program. Cue cards off-camera are helpful.

5. Avoid brusque and awkward gestures, fidgeting, weaving or nervousness, and vacant stares. Be interested in the person to whom you are talking or listening and look at him. Do not stare at the activity behind the cameras which the viewer can't see. When you look at the top lens of the camera with the tally lights on, you are looking directly at your audience.

6. Sit or stand in a natural and comfortable position as planned in rehearsals. The director will suggest any necessary changes. Sit, stand, and perform other movements more slowly and deliberately than you normally do. This facilitates smooth camera movements.

7. Speak clearly and distinctly at a conversational level. Speak slowly and directly, but vary your pacing occasionally to avoid a monotonous voice pattern.

8. Don't feel that you must talk constantly. Pauses are important.

9. Present your material in the way you rehearsed it, keeping close to the format and timing of your outline.

10. Correct any errors you make naturally and quickly without calling undue attention to them.

E. STUDIO HAND SIGNALS.

1. *Stand-by*—The arm is upraised and so held until execution of the cue. The stand-by is a warning that a cue is about to be given. After the stand-by is given, complete silence should be observed in the studio.

2. *Cue*—The cue is given by bringing the arm down from the stand-by position and pointing with the index finger to the talent. The cue is used to initiate all on-camera action.

3. *Speed up*—The index finger is moved in a large circle. The speed up is used to signal talent to step up the pace of his lecture or demonstration.

4. *Slow down*—The hands are moved away from each other in a stretching gesture such as used in pulling taffy. The slow down is used to signal talent to slacken the pace of his lecture or demonstration.

5. *Tighten up*—The hands are raised vertically and moved toward each other. This signals the talent (two or more persons) to move closer together.

6. *Eye contact*—Index finger is pointed to the eye. This signal reminds the talent to look at the taking lens of the "hot" camera. The "hot" camera is the one with the tally lights on and the taking lens is the uppermost one on the lens turret.

7. *Face (eyes) up*—The hands are placed under the chin. This signal indicates talent's facial expression is becoming dead pan and lacks verve or sparkle.

8. *Cut*—The hand is drawn, palm down, across the throat. This signals a halt to all studio activity.

9. *Camera cue*—This is a reminder to teach to the "live" camera. The hand moves in a large arc and points to the camera which is on the air.

## GLOSSARY OF TELEVISION TERMS

A. TERMS GENERALLY ACCEPTED IN TV STUDIOS AND CONTROL ROOMS.

1. *Ad Lib*—Use of either words or actions not contained in the script or done completely without script.

2. *Air Time*—The time at which a given telecast is due to start.

3. *Aspect Ratio*—The proportional relationship of the height to the width of a picture. In television the ratio is four wide to three high.

4. *Bloom*—The glare caused by the reflection of light from an object into the lens of the camera.

5. *Burn In*—Negative image retained by the pick-up tube when the camera is left stationary for several minutes.

6. *Camera*

a. Close-up camera—The camera which is used to take most of the close-up shots.

b. Cover camera—The camera which is used to take the wide shots.

c. Film camera—The camera into which all film material is projected.

d. "Live" camera—The camera which is on the air.

e. On-camera—A phrase describing any action performed before a "live" camera.

7. *Cue or Prompter Card*—A card, held out of camera range, upon which is written dialogue or action cues.

8. *Cut*—This term has two uses: (a) To stop abruptly and (b) to switch from one camera to another.

9. *Dissolve*—The fading out of one picture as another is faded in.

10. *Dolly (Noun)*—The wheeled mechanism upon which the camera is mounted.

11. *Dolly (Verb)*—The act of moving the camera (and tripod mount) toward or away from talent.

12. *Engineer:*

a. Audio—Person in charge of controlling the placement of microphones and the quality and quantity of audio from all sources.

b. Video—Person in charge of camera alignment and picture quality from all video sources.

13. *Fade out*—The reduction of video power until the screen is black.

14. *Fade In*—The increasing of video power until a broadcast quality picture is achieved.

15. *Flip Card*—Cards mounted in a loose leaf binder and dropped in place before a live camera.

16. *Floor Manager*—Person in charge of all studio activities.

17. *Frame Up*—A command to the cameraman to adjust a shot for better picture composition.

18. *Head Room*—A command to the cameraman to put more space between talent's head and top of picture.

19. *I.D.*—Slide or flip card identifying the studio.

20. *Key Picture Situation*—A sequence change within a telecast requiring changes in lighting, camera positioning, etc. High points of the program.

21. *Kinescope, or "kine"*—A film recording of a "live presentation."

22. *Lens:*

a. 210 mm lens gives a tight shot.

b. 100 mm lens gives a medium shot.

c. 35 mm lens gives a wide shot.

23. *Lighting:*

a. Back light—Light directed behind the talent to provide suitable contrast from the background.

b. Foundation light—Over-all illumination of the set and talent.

c. Key light—Light placed on talent from side to bring out facial features.

d. Tally lights—The red lights on a camera which light up to indicate that the camera is "live" or on the air.

24. *Limbo*—Action shot in front of a black background causing the talent or object being telecast to appear as if suspended in space.

25. *Master control*—The point at which all audio and video sources are put on the air.

26. *Monitor*—A TV set limited to the portrayal of the video signal fed to it by the video system.

27. *Multiplexer*—A device containing a series of mirrors to deflect the pictures from film and slide projectors into the camera.

28. *Pan*—Camera movements on a horizontal plane.

29. *Potentiometer ("pot")*—A device which allows a smooth increase or decrease of audio or video signal (gain).

30. *Program Director*—The person responsible for advising instructor in preparation of script, rehearsing talent, and directing telecasts.

31. *Program Format*—The structure, framework, or type of telecast.

32. *Receiver*—A TV set with the capability of selecting or tuning several different telecasts.

33. *Shots*—Shots are named for number of performers in the scene *(ONE-SHOT, TWO-SHOT, etc.)*, position from which the camera views the object *(HIGH-SHOT, OVER-THE-SHOULDER SHOT, etc.)*, or portion of the object in the scene *(FULL-FIGURE-SHOT, WAIST-SHOT, HEAD-SHOT, etc.)*. Some shots are named for movements made by the camera. In a *PAN-SHOT* the camera follows the action by turning right or left in a horizontal motion. In a *TILT-SHOT* the camera rotates upward or downward in a vertical plane. In a *TRUCK-SHOT* the camera moves in a path parallel to that of the talent, and in a *DOLLY-SHOT* the camera moves toward or away from the object. Shots are also named for the apparent distance of the object from the camera. The basic names are *LONG-SHOT (LS)*, *MEDIUM-SHOT (MS)*, and *CLOSE-UP (CU)*, while the variants of the basic names are *EXTREME LONG-SHOTS (ELS)*, *MEDIUM CLOSE-UP (MCU)*, and *EXTREME CLOSE-UP (ECU)*.

34. *Super*—The images from two cameras are visible on the screen at the same time. (Superimposed)

35. *Switcher*—The mechanism into which all video sources come that are to be put on the air, by means of push buttons, as desired.

36. *Talent*—Any person or persons appearing before the camera.

37. *Talk-back system*—An intercommunication system enabling students in seminar rooms to communicate with the instructor in the studio.

38. *Technical Director (T.D.)*—The person who operates the switcher at the director's command.

39. *Telecast*—Any presentation originating from TV studio.

40. *Teleprojector*—A device which projects a televised picture onto a screen.

41. *Teleprompter*—A continuous roll device from which talent may read cues or his entire script.

42. *Tilt*—Camera movements executed in a vertical plane.

43. *Truck*—Camera (and tripod mount) movement which is parallel to object or talent.

44. *VTR*—Video tape recorder. The device for making a magnetic tape recording of both audio and video signals.

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